SoC for High Performance Smart TV System
LD11E (SC1405AP1-30A)

Features

- Suitable for high performance 2K/50p smart-TV solution
- Realized quickly responsive UI with high performance CPU (ARM® Cortex®-A53) and GPU

Application
(2K-TV 50p)
Specifications

- **SoC**
  - Package: FBGA (23x23mm)
  - Balls: 487pins, 0.8mm pitch
  - Power: 1.2/ 1.5/ 1.8/3.3V

- **CPU**
  - ARM® Cortex®-A53 x2
  - Instruction / Data caches: 32 / 32-KB

- **DDR memory**
  - DDR3-1600 (ch0:16bit, ch1:16bit)

- **General purpose peripherals**
  - Timers x16 (16-bit x12, 8-bit x4)
  - UART x4 (*maximum)
  - SPI x2 (*maximum)
  - I2C x2
  - NAND flash x1 (SLC)
  - eMMC x1 (Version5.0)

- **Media I/F**
  - USB: 2.0 x3-ports
  - Ethernet: x1-port (10/ 100Mbps)

- **Stream I/F**
  - Serial TS: In x3, In/ Out x2
  - Parallel TS: In x2, Out x1

- **Video I/O**
  - Analog input: SCART x1, RGB/ YPbPr x3
  - HDMI x4-ports (ver.1.4) *HDCP2.2
  - MHL x1-port (ver.2.1) (shared pins with HDMI)
  - LVDS (Dual link for 2K 50Hz)

- **Audio I/O**
  - Analog input: LR x3
  - Analog output: LR x2
  - Digital input: I2S x1, SPDIF x1
  - Digital output: I2S x1, SPDIF x1

- **Graphics processor**
  - Original GPU (1Gpixel/s)
  - OpenGL ES1.1/ 2.0 compliant

- **Standby microcontroller**
  - 32-bit microcontroller

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**Integrated DTV Demodulator:**
- DVB-T2/S2/T/C (Supports CI/CI+)

**Integrated high performance Multi-format Video Decoder supports (*1):**
- MPEG-1
- MPEG-2 MP@HL
- MPEG-4 AVC (H.264 HP@L4.1)
- HEVC (H.265 MP@L4.1 8/10bit)
- VC-1
- DivX (HD, plusHD)
- VP8
- VP9(8/10bit)
- JPEG (include Motion-JPEG)

**Integrated Audio Processor supports (*1):**
- MPEG-1 Layer 2/3
- MPEG-2 Layer 2/3
- MPEG-2 AAC (SBR)
- Dolby Digital (Plus)
- Dolby True HD
- DTS
- DTS-HD
- WMA 8/9
- WMA pro
- Vorbis
- FLAC
- Apple Lossless

**Integrated Video Processor:**
- Super-resolution
- Picture quality Adjustment for 2K pictures

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*1: To use some of these formats, you may have to acquire a license or perform a software development. In addition, some combinations of audio/video formats may have a limitation to use. For details, please contact our service representative.

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